

Application No. 09/712042
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Amendment
Attorney Docket No. S63.2N-6430-US03

REMARKS

This Amendment is in response to the Office Action dated **December 27, 2005**.
Each issue in the official action is addressed below.

Objections

Claims 20, 31, 32, and 34-45 were objected to because of the following informalities: It was asserted that claims 20, 34, 36, 37 and 45 do not further limit the parent claim, since the limitations are the same as recited as in claim 19. Regarding claims 31, 32, 39, 40 and 42, it was asserted that the term "nominal diameter" has not been defined and is therefore indefinite.

As to the asserted duplicative nature of claims 20, 34, 36-37 and 45, Applicant respectfully disagrees. In each case, the claimed subject matter is narrowed. As to claim 20, the subject matter is narrowed in that the first polymer pair (engineering polyurethane resins and polyurethane elastomers) mentioned in claim 19 is required, where it is not in claim 19. As to claim 34, the subject matter of claim 20 is further narrowed by requiring that the engineering polyurethane resins (the first polymer) be an aromatic polyurethane-polyether composition. As to claim 36, the subject matter of claim 20 is further narrowed in that the second polymer, which is required to be a polyurethane elastomer in claim 20, is required to be chosen from a specific group of polymers. Claim 37 similarly narrows the choices for the second polymer and thus narrows the subject matter of claim 34. Claim 45 further narrows the subject matter of claim 19 in that, instead of choosing the pair of first and second polymers from a group of 4 pairs of first and second polymers, it narrows the options down to 3 pairs of first and second polymers. It is respectfully submitted that each of the named claims does further restrict the respective claim on which it is dependent upon. Withdrawal of the objection is therefore requested.

As to the term "nominal diameter", it is defined in the claims themselves by assigning it to a particular pressure or pressure range. For example, in claim 39, the nominal diameter of the balloon is its diameter or size at 6 atm. "Nominal diameter" is a balloon's size or diameter at a nominal pressure. In this particular context, as can be seen in the graphs and figure descriptions in the present Specification, which illustrate the compliance of certain balloon from nominal diameter to burst, the nominal diameter is the starting point from which to measure the

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growth and distension of the balloon to burst over a pressure range. The nominal diameter starting points are defined in the claims by assigning a particular pressure or pressure range. This nominal diameter starting point is used in the present application to allow direct comparison of the compliance attributes of various balloons. Such terminology and application is widely used and is well known in the art.

§102 Rejections

Claims 19-20, 33-37, 41 and 45 were rejected under 35 USC §102(e) as being anticipated by Hamlin (5270086). A full account of the rejection may be found in numbered paragraph 2 starting on page 2 of the official action.

Applicant respectfully traverses. Hamline does not teach the melt blend of at least two thermoplastic polymers as detailed in claim 19. In justifying the rejection, it is asserted in the official action that Hamlin discloses a balloon for a medical device (fig 4) formed from a length of tubing by radial expansion of the tubing under pressure, the polymer material comprising a melt blend product [citing col. 2, lines 4-11] made of at least two thermoplastic polymers [citing col. 1, line 65 to col. 2, line 11]. This is not the case. Rather than discussing a polymer material comprising a melt blend, the cited columns and lines of the reference make reference to a multi-layer balloon where the individual *layers* afford a desirable property to a composite structure. The cited disclosure does not refer to a single material made up of a combination of polymers in the manner specified in claim 19. The layers are clearly referred to as separate and distinct.

In continuing the basis for rejection, it is further asserted that the cited reference discloses a first of said polymers being an engineering resin [col 2 lines 30-68] having a flexural modulus of 240,000 psi and a second of said polymers being a block copolymer elastomer [col 2 lines 30-68] having a flexural modulus of about 150,000 psi or less. Once again, the rejection incorrectly asserts that a material made of a melt blend of first and second thermoplastic polymers, as addressed in claim 19, is equivalent to a multi-layer balloon made up of a layer of a first polymer and layer made up of a second polymer. Column 2, lines 30-68, comprise two paragraphs of materials. As indicated above, the rejection references both paragraphs (lines 30-68) as disclosure of both the first thermoplastic polymer and the second thermoplastic polymer required in claim 19. However, lines 31-54 list individual examples of materials that are used for

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the tensile layer or ply (see col. 2, lines 1-10) and lines 55-68 of column 2 list individual examples of materials that may be used for the inner bonding layer. The reference teaches choosing one of the examples in lines 31-54 for the outer tensile layer and choosing one of the examples in lines 55-68 for the inner bonding layer. The disclosure does not indicate combining specific pairings of polymers, except for the pairings *specifically* listed such as ABS/nylon (col. 2, line 34), in a *melt blend* to form a polymer material, as required by claim 19.

The rejection asserts that the cited reference does disclose pairings of polymers, wherein the first and second polymers are a pair selected from the group consisting of engineering polyurethane resins and polyurethane elastomers; aromatic polyesters or copolyesters and aromatic polyesterpolyether block copolymers; aromatic polyesters and polyurethane polyester block copolymers; and polycarbonates and polycarbonate urethane elastomers. However, no examples are given in the rejection that fall within the parameters of claim 19.

Citing column 2, line 31, to column 3, line 8, it is asserted in the rejection that Hamlin discloses that many combinations from the materials disclosed can be made depending on the desired characteristics such as strength, expansion pressure, etc. However, the only mention of "combinations" (col. 3, lines 1-8) is directed to different combinations of layers of the multilayer balloon. As mentioned above, the disclosure teaches choosing one of the examples in lines 31-54 for the outer tensile layer and choosing one of the examples in lines 55-68 for the inner bonding layer. There is no specified combination in the rejection that falls within the parameters of claim 19. As such, withdrawal of the rejection is respectfully requested.

Dependent claims 20, 33-37, 41 and 45, among other reasons, are similarly not anticipated by the cited reference.

§103 Rejections.

Claims 30-32, 38-40 and 42-44 were rejected under 35 U.S.C. §103(a) as being unpatentable over Hamlin (5,270,086). A full account of the rejection may be found in numbered paragraph 4 starting on page 4 of the official action.

Among other reasons, dependent claims 30-32, 38-40 and 42-44, which are dependent upon claim 19, are similarly not anticipated or obvious for the reasons stated above in response to the §102 rejection. As such, withdrawal of the rejection is respectfully requested.

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Conclusion

The application should now be in condition for allowance. Allowance is therefore earnestly solicited. If the Examiner would like to further discuss the case, he is encouraged to contact the undersigned.

Respectfully submitted,

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